

HP Docket No. 200315232-1

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Canceled)
2. (Previously presented) The optical disk drive of claim 21, wherein the encoder is additionally configured to track the disk angular orientation features, the disk angular orientation features molded within the region distinct from the label region.
3. (Previously presented) The optical disk drive of claim 21, wherein the OPU is additionally configured to track the disk angular orientation features, the disk angular orientation features defined within the label region.
4. (Previously presented) The optical disk drive of claim 21, additionally comprising a control procedure to coordinate disk speed data from the encoder with the OPU during application of the image.
5. (Canceled)
6. (Previously presented) A processor-readable medium as recited in claim 22, wherein the instructions for tracking track the disk angular orientation features with the OPU.
7. (Previously presented) A processor-readable medium as recited in claim 22, wherein the instructions for tracking track the disk angular orientation features with the encoder.

HP Docket No. 200315232-1

8. (Previously presented) A processor-readable medium as recited in claim 22, wherein the controlling comprises instructions for:

processing the disk speed data to determine times when the speed of the spindle motor should be increased and times when the speed of the spindle motor should be decreased to maintain desired speed.

9. (Previously presented) A processor-readable medium as recited in claim 22, wherein the interpreting comprises instructions for:

distinguishing between a first and a second signal received from the encoder, wherein the first and second signals result from differences in light reflection corresponding to the presence or absence of the disk speed features.

10. (Previously presented) A processor-readable medium as recited in claim 22, wherein the interpreting comprises instructions for:

distinguishing between a first and a second signal received from the encoder, wherein the first signal results when light is reflected off a mirrored surface to a sensor and the second signal results when light is reflected by a saw tooth feature that also deflects a portion of the light away from the sensor.

11. (Previously presented) A processor-readable medium as recited in claim 22, wherein the interpreting comprises instructions for:

distinguishing between a first and a second signal received from the encoder, wherein the first signal results when light is reflected off a mirrored surface and wherein the second signal results when light is reflected by a substantially circular molded pit that also deflects a portion of the light away from the sensor.

12. (Previously presented) A processor-readable medium as recited in claim 22, wherein

HP Docket No. 200315232-1

the interpreting comprises instructions for:

distinguishing between the output signals, wherein the output signals are associated with levels of light reflectivity within a region defined on a mirror surface adjacent to the coating on the label side of the disk.

13. (Previously presented) An optical disk drive, comprising:

means for controlling a rate at which a spindle motor spins an optical disk;

means for gathering disk speed data by tracking a plurality of substantially identical disk speed features defined on the optical disk as the optical disk is spun by the spindle motor, each of the disk speed features spaced apart substantially equally in a first annular ring at a first radial position on the optical disk and having an angular span that is substantially identical to an angular span of a gap between each two of the disk speed features;

means for tracking, with an OPU, disk angular orientation data defined by disk angular orientation features defined in a second annular ring at a second radial position on the optical disk, wherein the second annular ring abuts the first annular ring, and wherein the annular rings are proximate a central hub of the disk; and

means for labeling the optical disk according to the disk speed data and the disk angular orientation data.

14. (Previously presented) The optical disk drive of claim 13, additionally comprising:

means for passing the disk angular orientation data to the means for labeling to create an image having a desired angular orientation on a coating on the optical disk.

15. (Previously presented) The optical disk drive of claim 13, wherein the disk angular orientation features are molded features located radially inside an area on the optical disk reachable by an OPU, to produce the disk angular orientation data.

HP Docket No. 200315232-1

16. (Original) The optical disk drive of claim 13, additionally comprising:
means for processing the disk speed data from an encoder to determine times when speed of the spindle motor should be increased and times when the speed of the spindle motor should be decreased.

17. (Previously presented) The optical disk drive of claim 13, wherein the means for gathering disk speed data comprises:
means for distinguishing between a first and a second signal received from an encoder, wherein the first and second signals result from differences in light reflection corresponding to the presence or absence of the disk speed features.

18. (Previously presented) The optical disk drive of claim 13, wherein the means for gathering disk speed data comprises:
means for distinguishing between a first and a second signal received from an encoder, wherein the first signal results when light is reflected off a mirrored surface to a sensor and the second signal results when light is reflected to the sensor by a saw tooth feature that also deflects a portion of the light away from the sensor.

19. (Previously presented) The optical disk drive of claim 13, wherein the means for gathering disk speed data comprises:
means for distinguishing between a first and a second signal received from an encoder, wherein the first signal results when light is reflected off a mirrored surface to a sensor and wherein the second signal results when light is reflected to the sensor by a substantially circular molded pit that also deflects a portion of the light away from the sensor.

20. (Original) The optical disk drive of claim 13, wherein the means for gathering disk speed data comprises:

HP Docket No. 200315232-1

means for distinguishing between encoder sensor outputs associated with levels of light reflectivity within a region defined on a mirror surface adjacent to a coating on the disk.

21. (Previously presented) An optical disk drive, comprising:
a spindle motor to turn an optical disk;
an OPU to apply an image to a coating within a label region of the optical disk; and
an encoder configured to track substantially identical disk speed features in a first annular ring at a first radial position on the optical disk in a region distinct from the label region so as to thereby obtain disk speed data, the disk drive further configured to track disk angular orientation features different from the disk speed features in a second annular ring at a second radial position on the optical disk so as to thereby obtain angular orientation data, the second annular ring abutting the first annular ring, the annular rings proximate a central hub of the disk, the disk angular orientation features different from the disk speed features, and at least some of the disk angular orientation features having an overlapping angular position with at least some of the disk speed features.

22. (Previously presented) A processor-readable medium comprising processor-executable instructions for labeling an optical disk, the processor-executable instructions comprising instructions for:

controlling a spindle motor within an optical disk drive to regulate angular speed of the optical disk;

interpreting output signals of an encoder resulting from sensation of substantially identical disk speed features defined in a first annular ring at a first radial position on the optical disk as the optical disk is spun by the spindle motor to produce disk speed data;

tracking disk angular orientation features defined in a second annular ring at a second radial position on the optical disk and different from the disk speed features to produce disk angular orientation data, at least some of the disk angular orientation features having an

HIP Docket No. 200315232-1

overlapping angular position with at least some of the disk speed features, the second annular ring abutting the first annular ring, and the annular rings proximate a central hub of the disk; and marking a coating on the optical disk with an OPU, wherein the OPU is operated according to the disk speed data and the disk angular orientation data.

23. (Canceled)

24. (Previously presented) The optical disk drive of claim 21, wherein the first radial position is nearer the central hub of the disk than the second radial position.

25. (Previously presented) The processor-readable medium as recited in claim 22, wherein the first annular ring is nearer the central hub of the disk than the second annular ring.

26. (Previously presented) The optical disk drive of claim 13, wherein the first annular ring is nearer the central hub of the disk than the second annular ring.

27. (New) The optical disk drive of claim 21, wherein the location of the annular rings on the optical disk maximizes the size of a continuous area of the label region.

28. (New) The optical disk drive of claim 21, wherein the label region has a ring shape that extends from an inner radial position to an outer radial position, and wherein at least one of the first and second radial positions is closer than the inner radial position to the central hub.

29. (New) The processor-readable medium as recited in claim 22, wherein the location of the annular rings on the optical disk maximizes the size of a continuous area of the label region.

30. (New) The processor-readable medium as recited in claim 22, wherein the label

HP Docket No. 200315232-1

region has a ring shape that extends from an inner radial position to an outer radial position, and wherein at least one of the first and second radial positions is closer than the inner radial position to the central hub.

31. (New) The optical disk drive of claim 13, wherein the location of the annular rings on the optical disk maximizes the size of a continuous area of the label region.

32. (New) The optical disk drive of claim 13, wherein the label region has a ring shape that extends from an inner radial position to an outer radial position, and wherein at least one of the first and second radial positions is closer than the inner radial position to the central hub.

33. (New) The optical disk drive of claim 21, wherein the label region has a ring shape that extends from an inner radial position to an outer radial position, and wherein the first and second radial positions are closer than the inner radial position to the central hub.